

What is claimed is:

1. A modular system for programming machine automation controls, comprising:
  - 5        a library of minor step modules;
  - a procedure creator for creating a machine automation procedure from an assembly of said minor step modules;
  - a product type manager for inputting product parameters independent of said minor step modules;
  - 10      a system configuration manager for defining machine configuration independent of said minor step modules; and
  - an execution engine for calling said procedure and maintaining information flow in and out of said minor step modules.
- 15     2. The system according to claim 1, wherein procedures can further include major step modules assembled from a plurality of said minor step modules to perform a larger machine function.
- 20     3. The system according to claim 2, wherein procedures are created from one or more components selected from the group consisting of major step, minor step, repeat, and if statement.
- 25     4. The system according to claim 1, further including an information center to provide a common screen for output display.
5. The system according to claim 1, wherein security can be set to a plurality of access levels by leveraging an existing security model to provide full access to some, while limiting access to others.
- 30     6. The system according to claim 1, wherein one or more minor step modules are directly embedded within the execution engine for improved performance.

7. A modular method for programming machine automation controls, comprising the steps of:
  - (i) providing a library of minor step modules;
  - 5 (ii) creating a machine automation procedure from an assembly of said minor step modules;
  - (iii) inputting product parameters independent of said minor step modules;
  - (iv) defining machine configuration independent of said minor step 10 modules;
  - (v) calling said procedure; and
  - (vi) maintaining information flow in and out of said minor step modules.
8. The method according to claim 6, further including the step of assembling 15 major step modules from a plurality of said minor step modules to perform a larger machine function within said procedure.
9. A modular system for programming machine automation controls, comprising:
  - 20 a module for providing a library of minor step modules;
  - a module for creating a machine automation procedure from an assembly of said minor step modules;
  - a module for inputting product parameters independent of said minor step modules;
  - 25 a module for defining machine configuration independent of said minor step modules;
  - a module for calling said procedure; and
  - a module for maintaining information flow in and out of said minor step modules.

10. A storage medium readable by a computer encoding a computer process to provide a modular method for programming machine automation controls, the computer process comprising:

- a processing portion for providing a library of minor step modules;
- 5 a processing portion for creating a machine automation procedure from an assembly of said minor step modules;
- a processing portion for inputting product parameters independent of said minor step modules;
- 10 a processing portion for defining machine configuration independent of said minor step modules;
- a processing portion for calling said procedure; and
- a processing portion for maintaining information flow in and out of said minor step modules.